

1645

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/508,967

DATE: 02/27/2001
TIME: 15:30:51

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Output Set: N:\CRF3\02272001\I508967.raw

3 <110> APPLICANT: WAHLGREN, MATS
4 BARRAGAN, ANTONIO
5 CARLSON, JOHAN
6 QIJUN, CHEN
7 FERNANDEZ, VICTOR
9 <120> TITLE OF INVENTION: MALARIA POLYPEPTIDES
11 <130> FILE REFERENCE: 45300-59676
13 <140> CURRENT APPLICATION NUMBER: 09/508,967
14 <141> CURRENT FILING DATE: 2000-04-07
16 <150> PRIOR APPLICATION NUMBER: PCT/SE98/01675
17 <151> PRIOR FILING DATE: 1998-09-18
19 <160> NUMBER OF SEQ ID NOS: 10
21 <170> SOFTWARE: PatentIn Ver. 2.1
23 <210> SEQ ID NO: 1
24 <211> LENGTH: 2228
25 <212> TYPE: PRT
26 <213> ORGANISM: Plasmodium falciparum
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MAR 07 2001

TECH CENTER 1600/2900

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101           20           25           30
103 Glu Ala Lys Asn Tyr Val Ser Glu Leu Lys Gly Ser Leu Ser Leu Ala
104           35           40           45
106 Ser Ile Leu Gly Glu Thr Ala Phe Thr Val Lys Ser Met Gln Thr Glu
107           50           55           60
109 Ser Lys Tyr Thr Glu Leu Ile Glu Ala Asn Ser Lys Arg Asn Pro Cys
110  65           70           75           80
112 Lys Lys Asp Gly Lys Gly Asn Asp Val Asp Arg Phe Ser Val Lys Glu
113           85           90           95
115 Gln Ala Gly Tyr Asp Asn Lys Lys Met Lys Cys Ser Asn Gly Met Thr
116          100          105          110
118 Cys Ala Pro Phe Arg Arg Leu His Leu Cys Asn Lys Asn Phe Pro Asn
119          115          120          125
121 Met Asn Ser Asn Asp Ser Ser Lys Ala Lys His Asp Leu Leu Ala Glu
122          130          135          140
124 Val Cys Met Ala Ala Lys Tyr Glu Gly Glu Ser Ile Lys Thr His Tyr
125 145          150          155          160
127 Pro Lys Tyr Asp Ser Lys Tyr Pro Gly Ser Asp Phe Pro Met Cys Thr
128          165          170          175
130 Met Leu Ala Arg Ser Phe Ala Asp Ile Gly Asp Ile Ile Arg Gly Arg
131          180          185          190
133 Asp Leu Tyr Leu Gly Asn Lys Lys Lys Gln Asn Gly Lys Glu Thr
134          195          200          205
136 Glu Arg Glu Lys Leu Glu Gln Lys Leu Lys Glu Ile Phe Lys Lys Ile

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137      210      215      220
139 His Asp Asn Leu Lys Asp Lys Glu Ala Gln Lys Arg Tyr Asn Gly Asp
140 225      230      235      240
142 Glu Asp Pro Asn Phe Tyr Lys Leu Arg Glu Asp Trp Trp Thr Ala Asn
143      245      250      255
145 Arg Glu Thr Val Trp Gly Ala Met Thr Cys Ser Lys Glu Leu Asp Asn
146      260      265      270
148 Ser Ser Tyr Phe Arg Ala Thr Cys Asn Asp Thr Gly Gln Gly Pro Ser
149      275      280      285
151 Gln Thr His Asn Lys Cys Arg Cys Asp Lys Asp Lys Gly Ala Asn Ala
152      290      295      300
154 Gly Lys Pro Lys Ala Gly Asp Gly Asp Val Thr Ile Val Pro Thr Tyr
155 305      310      315      320
157 Phe Asp Tyr Val Pro Gln Tyr Leu Arg Trp Phe Glu Glu Trp Ala Glu
158      325      330      335
160 Asp Phe Cys Arg Lys Lys Lys Lys Leu Glu Asn Leu Glu Lys Gln
161      340      345      350
163 Cys Arg Gly Lys Asp Lys Ser Asp Glu Tyr Arg Tyr Cys Ser Arg Asn
164      355      360      365
166 Gly Tyr Asp Cys Glu Gln Thr Ile Ser Arg Lys Gly Lys Val Arg Met
167      370      375      380
169 Gly Lys Gly Cys Thr Asp Cys Phe Phe Ala Cys Gly Ser Tyr Glu Asn
170 385      390      395      400
172 Trp Ile Asp Asn Gln Arg Lys Gln Phe Asp Lys Gln Lys Lys Tyr Thr
173      405      410      415
175 Lys Glu Ile Ser Asp Gly Gly Gly Arg Lys Lys Arg Ala Val Gly Gly
176      420      425      430
178 Thr Thr Lys Tyr Glu Gly Tyr Glu Lys Ser Phe Tyr Glu Lys Leu Lys
179      435      440      445
181 Asn Asp Gly Tyr Gly Thr Val Asp Ala Phe Leu Gly Leu Leu Asn Asn
182      450      455      460
184 Glu Lys Ala Cys Lys Asp Ile Thr Asp Gly Gly Lys Ile Asn Phe Lys
185 465      470      475      480
187 Glu Val Asn Ser Gly Gly Gly Val Val Gly Gly Gly Ser Gly Gly Thr
188      485      490      495
190 Ser Gly Ala Ser Gly Thr Asn Asp Glu Asn Lys Gly Thr Phe Tyr Arg
191      500      505      510
193 Ser Glu Tyr Cys Gln Pro Cys Pro Asp Cys Gly Val Gln His Lys Gly
194      515      520      525
196 Gly Asn Gln Trp Glu Arg Lys Thr Lys Val Lys Lys Met Arg Trp Ser
197      530      535      540
199 Lys Leu Tyr Lys Pro Ile Asn Gly Lys Met Val Leu Leu Leu Lys Ser
200 545      550      555      560
202 Leu Lys Val Val Lys Asp Met Met Ile Leu Lys Lys Asn Trp Lys Glu
203      565      570      575
205 Phe Cys Leu Thr Gln Asn Ser Ser Asp Gly Ser Val Gly Ser Val Val
206      580      585      590
208 Thr Thr Gly Ala Ser Gly Gly Asn Ser Glu Lys Lys Glu Leu Tyr Asp
209      595      600      605

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211 Glu Trp Lys Cys Tyr Lys His Asn Glu Val Gln Lys Val Asn Val Gln
212      610      615      620
214 Gly Glu Val Glu Glu Asp Asp Glu Leu Lys Gly Ala Gly Gly Leu
215 625      630      635      640
217 Cys Ile Leu Pro Asn Pro Lys Lys Asn Lys Glu Val Ser Glu Ala Lys
218      645      650      655
220 Ser Gln Asn Asn His Ala Asp Ile Gln Lys Thr Phe His Asp Phe Phe
221      660      665      670
223 Tyr Tyr Trp Val Ala His Met Leu Lys Asp Ser Ile His Trp Arg Thr
224      675      680      685
226 Lys Arg Leu Lys Ser Cys Ile Ser Asp Gly Lys Thr Met Lys Cys Arg
227      690      695      700
229 Asn Gly Cys Asn Lys Lys Cys Asp Cys Phe Glu Lys Trp Val Lys Glu
230 705      710      715      720
232 Lys Glu Thr Glu Trp Lys Pro Ile Lys Asp His Phe Lys Thr Gln Glu
233      725      730      735
235 Gly Ile Pro Glu Gly Tyr Tyr Phe Thr Thr Leu Glu Leu Ile Leu Lys
236      740      745      750
238 Leu Gln Phe Leu Lys Glu Asp Thr Glu Glu Asn Thr Glu Asn Ser Leu
239      755      760      765
241 Asp Ala Glu Glu Ala Glu Glu Leu Lys His Leu Gln Lys Ile Leu Lys
242      770      775      780
244 Leu Glu Asn Glu Asn Asn Leu Ala Val Val Asn Ala Gly Thr Glu Gln
245 785      790      795      800
247 Lys Thr Leu Met Asp Lys Leu Leu Asn His Glu Leu Asn Asp Ala Thr
248      805      810      815
250 Lys Cys Lys Asp Cys Pro Leu Pro Glu Glu Asp Lys Ser Arg Gly Arg
251      820      825      830
253 Ser Ala Asp Pro Ser Pro Asp Ile Phe Ile Pro Arg Pro Glu Glu Lys
254      835      840      845
256 Glu Asp Asp Glu Asn Glu Asp Asp Glu Asp Glu Val Arg Asp Asp
257      850      855      860
259 Glu Glu Thr Ala Lys Glu Thr Thr Glu Gly Ser Ala Thr Asp Thr Thr
260 865      870      875      880
262 Thr Ser Leu Asp Val Cys Pro Ile Val Gly Lys Val Leu Thr Lys Asp
263      885      890      895
265 Asn Glu Ser Leu Gln Asp Ala Cys Ser Leu Lys Tyr Gly Gly Asn Asn
266      900      905      910
268 Ser Arg Leu Gly Trp Arg Cys Val Thr Pro Ser Gly Glu Pro Thr Thr
269      915      920      925
271 Ser Ser Asp Lys Asn Gly Ala Ile Cys Val Pro Pro Arg Arg Arg Arg
272      930      935      940
274 Leu Tyr Ile Lys Lys Ile Val Asp Trp Ala Thr Lys Thr Glu Ser Pro
275 945      950      955      960
277 Gln Ala Ser Gly Ser Glu Ala Ser Ser Thr Ser Gly Ser Thr Thr Pro
278      965      970      975
280 Pro Asp Ser Lys Glu Ala Leu Leu Lys Ala Phe Val Glu Ser Ala Ala
281      980      985      990
283 Ile Glu Thr Phe Phe Leu Trp His Arg Tyr Lys Glu Glu Lys Lys Ala

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286 Val Ala Gln Glu Gly Ala Gly His Gly Leu Pro Arg Val Glu Glu Gly
287      1010          1015          1020
289 Ser Pro Glu Tyr Asp Pro Glu Asp Lys Leu Lys Glu Gly Lys Ile Pro
290 1025          1030          1035          1040
292 Asp Gly Phe Leu Arg Gln Met Phe Tyr Thr Leu Gly Asp Tyr Arg Asp
293      1045          1050          1055
295 Ile Leu Phe Ser Gly Ser Asn Asp Thr Thr Ser Val Ser Lys Asp Thr
296      1060          1065          1070
298 Pro Ser Ser Ser Asn Asp Asn Leu Lys Asn Ile Val Leu Leu Ala Ser
299      1075          1080          1085
301 Gly Ser Thr Glu Gln Glu Arg Glu Lys Met Asn Lys Tyr Lys Glu Ile
302      1090          1095          1100
304 Lys Asn Phe Arg Lys Cys Ser Thr Glu Arg Ser Ala Pro Asn Leu Val
305 1105          1110          1115          1120
307 Ser His Pro Gln Thr Trp Trp Glu Asn Asn Gly Lys Tyr Ile Trp His
308      1125          1130          1135
310 Gly Met Val Cys Ala Leu Thr Ser Lys Asp Lys Ile Ala Lys Gly Val
311      1140          1145          1150
313 Glu Lys Lys Pro Gln Lys Ile Glu Asn Pro Glu Asn Leu Trp Asp Glu
314      1155          1160          1165
316 Ala Asn Lys Lys Pro Lys Pro Pro Gln Tyr Gln Tyr Thr Asn Val Lys
317      1170          1175          1180
319 Leu Asp Glu Asn Ser Gly Thr Ser Pro Arg Thr Thr Gln Thr Gln Ala
320 1185          1190          1195          1200
322 Ser Ser Asp Asn Thr Pro Thr Thr Leu Thr His Phe Val Lys Arg Pro
323      1205          1210          1215
325 Thr Tyr Phe Arg Trp Phe Glu Glu Trp Gly Glu Ser Phe Cys Arg Glu
326      1220          1225          1230
328 Arg Lys Lys Arg Leu Lys Gln Ile Lys Val Asp Cys Lys Val Glu Asn
329      1235          1240          1245
331 Gly Asp Val Gly Arg Cys Ser Gly Asp Gly Glu Ala Cys Asp Ser Ile
332      1250          1255          1260
334 Ser Thr His Asp Tyr Ser Thr Val Pro Ser Phe Asn Cys Pro Gly Cys
335 1265          1270          1275          1280
337 Gly Lys His Cys Ser Ser Tyr Arg Lys Trp Ile Glu Arg Lys Lys Ile
338      1285          1290          1295
340 Glu Phe His Lys Gln Ser Asn Ala Tyr Gly Gln Gln Lys Thr Asp Ala
341      1300          1305          1310
343 Thr Arg Asn Asn Gly Asn Thr Phe Asp Lys Glu Phe Cys Lys Thr Leu
344      1315          1320          1325
346 Glu Thr Trp Pro Asp Ala Ala Lys Phe Leu Glu Arg Leu Lys Asn Gly
347      1330          1335          1340
349 Pro Cys Lys Thr Asn Lys Glu Tyr Gly Gly Asp Asp Ile Asp Phe Glu
350 1345          1350          1355          1360
352 Lys Asp Ser Lys Thr Phe Gln His Thr Glu Tyr Cys Gly Pro Cys Pro
353      1365          1370          1375
355 Lys Phe Lys Thr Asn Cys Gln Asn Gly Asn Cys Gly Val Ser Gly Leu
356      1380          1385          1390

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